

Linac Upgrade Checklist

Just double-checking

Mon, May 14, 2001

Based upon experiences upgrading two Linac RF stations for PowerPC support, here is a checklist of points not to forget as we install more nodes in this way.

Perform DABBEL downloading of carefully-edited Accelerator device specifications. In some cases, the channel numbers and bit numbers have to change so that all the new stations have a similar layout. The SRM addresses are sometimes changed, too.

If Arcnet address is changed, modify it on the SRM front panel. Reboot the SRM.

Be sure that the maximum number of bytes in the SRM request entry of the Data Access Table is large enough to include all the data delivered by the SRM.

Check that vacuum valves are ok. When rebooting a newly-upgraded system, the BBYTE and ADATA tables may have old data values in them. For this reason, it is necessary to do an Acnet Restore of the relevant devices from the new node. We temporarily see 17 -10 errors during this, but they seem to go away after awhile.

Check that, following DABBEL downloading, there are no longer devices that can generate alarm messages and possibly inhibit beam in the old token ring system.

All Basic Status properties need to have appropriate masks specified, since the PowerPC code does not have the swap-bytes bug that exists in the IRM code. This applies for all cases in which the Basic Status property accesses 4 bytes.

It takes several careful steps to get AEOLUS to recognize a new front-end node. Page D98 needs to indicate that the new node is "alarmable." That same page, or maybe some other page, needs to indicate that the new node is "operational." Also, there may be a secret entry to be made by Kevin Cahill, too. We need to check the destination node number for alarms stored at PAGEM+6. It is 09F1 for Linac alarms. De-active channels and bits in old system, or retire old system.

For nonlinear RF channels, we need to install the "knee" voltages by hand, since there will not be a setting PDB that can download such data.

Combined binary status channels need Reading properties DABBELed in, or we can't get descriptive text, etc, for those channels. A digital alarm block is needed to force the bit 14 flag bit in the alarms flags word to be set for these channels; otherwise, it must be set manually.

Certain generic devices must be DABBELed in to support page L25 and L23.

Disable/ remove Data Access Table entries in old system, or retire old system.

Disable LATBL entries in old system, or retire old system.